

# School Improvement Plan – Numeracy

Drumshanbo Vocational School, Drumshanbo, Co. Leitrim.

## Summary of main strengths

- The PDST first year Maths Competency test, indicates that the following topics were strong: computation, computation language, order of operations, decimals, integers, identifying the pattern/sequence, interpreting the graph and table and measure in terms of units, language and length.
- DVS was one of 183 schools in Ireland that participated in the OECD's Programme for International Student Assessment (PISA) in the spring of 2012. DVS's average problem solving score was 499 compared to the average score of 498 for Ireland.
- Using the PDST Subject Analysis sheet for the most recent results in the State Exams (2014), uptake of Junior Certificate foundation level Maths was 5% below the national average. Students achieving grades A, B and C at Ordinary level is above the national average – i.e. students achieving ordinary level honours is 27% above the national average. In that same year, failure rate in both Ordinary Level and Higher Level Mathematics was half the National average.
- 82% of teachers are comfortable dealing with numeracy as it arises in their subject.
- 73% of teachers surveyed believe that problem solving is part of every subject.
- 52% of students believe that Maths skills help them to perform well in all subjects.
- 48% of students surveyed **always** get personal satisfaction when they can solve a difficult question.
- 82% of students surveyed said they always or sometimes discuss problems with a partner when trying to solve a problem.
- 84% of students surveyed said they always or sometimes see links between numeracy and everyday life.

## Summary of main areas requiring improvements

- The PDST first year Maths Competency test, indicates that the following topics could be prioritised for improvement: fractions, converting fractions to percentages, mathematical language, probability, problem solving, applied measure and probability.
- Only 28% of students surveyed say they like Maths and 30% say they are good at Maths.
- 24% of students surveyed said they enjoy doing Maths related activities outside of school.
- From discussions at Staff Numeracy Meeting, teachers felt it was important that the Maths department worked in conjunction with other departments to ensure that similar topics are covered at the same time where possible e.g. First year Geometry will be covered concurrently with Technical Graphics etc. where possible.
- In the PISA 2012 Report for DVS, in the Student Reported Attitudes, Beliefs and Behaviours relating to Maths, DVS's Intrinsic Motivation (interest in Maths) was -.05 compared to the Irish Average of +.06.

- With regards to Maths Anxiety DVS in the PISA Report was above average with a score of .24 compared to .11 from the Irish Average.
- The average uptake of Higher Level Maths at Junior Certificate Level over the past five years from 2010 to 2014 was 43%

## **Improvement Targets**

### **Target 1**

- To improve students' ability to convert from fractions to decimals and then to percentages correctly

### **Target 2**

- Increase the % of students who say they like Maths from 28% to 50%.

### **Target 3**

- Increase uptake of Higher Level Maths at Junior certificate Level by 5%

## **Required Actions**

### **Target 1**

- A whole-school approach to fractions and conversion to percentages will be developed, and introduced to staff and students by the numeracy team.
- All class exams to be returned to students as a mark and total marks available for test displayed on test. Students will be helped to work out the percentage themselves.
- All teachers will understand and be comfortable with the concept of numeracy.
- All subject teachers will be given "What's my Percentage?" poster to display in classrooms to aid whole-school approach to percentages.
- Teachers taking Extra Tuition Maths will put an emphasis on arithmetic and measurement.

### **Target 2**

- Students will be shown that they are good at numeracy in other subject areas. As discussed in previous staff meeting, examples to include drawing in Art or Technical Graphics, weighing in Home Economics, measuring length of materials in Metalwork and Woodwork.
- Students will be given positive feedback on the work they do in Maths class and for homework. Students will be given positive feedback on any numeracy aspects in other subjects.
- Maths week will be used to encourage students to attempt simple problems and to enjoy working out the problem.
- All first year students will be entered into the Irish Junior Maths Competition.

### **Target 3**

- Timetable will facilitate the division of Maths classes on the basis of ability from Second year up. This will be used as appropriate by the Maths Teachers.
- Students will be actively encouraged to take Higher Level Maths if appropriate to them.
- Maths classes will be kept as small as resources will allow

**Persons Responsible**

- The Numeracy team will be responsible for encouraging all staff to take responsibility for improving numeracy within the school. They will encourage all teachers to return all class exams as a mark and help students calculate the percentage themselves.
- The Maths department will be responsible for ensuring a common approach to fractions and conversion to percentages is used.
- The Numeracy team will explain the concept of numeracy to staff at staff meeting and make teachers more comfortable with the concept of numeracy.
- All teachers will be responsible for ensuring that students receive positive feedback on any Maths or numeracy related work they do in class and for homework.
- First year Maths teachers will enter their students into the Irish Junior Maths Competition.
- The School Principal is responsible for timetabling.

**Timeframe for Action**

September 2015 – June 2018

**Review Dates**

May 2016/2017/2018